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New and little-known Clusiidae (Diptera) from South Africa and Moçambique

by

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SYNOPSIS

The family Clusiidae is recorded for the first time from Subsaharan Africa and the following new species are described: *Tetrameringia aethiopica* sp. n. (Natal and Cape Province), *Sobarocephala zuluensis* sp. n., (Zululand) and *Sobarocephala milangensis* sp. n. (Moçambique). *Heteromeringia plumicornis* Lamb of the Seychelles is transferred to *Sobarocephala* Czerny, and *H. nigrifrons* Lamb, described from the Seychelles, is recorded from Zululand. The genus *Tetrameringia* was formerly known only from New South Wales. *Sobarocephala* has up till now been a New World genus; inclusion of the three Ethiopian Region species is a matter of some uncertainty.

INTRODUCTION

The well-defined Acalyptrate family Clusiidae is known from all faunal regions of the world. However, in the Ethiopian Region the family has been recorded only from the Seychelles Islands. For a number of years I have had some African species and a considerable number from Malagasy in the Natal Museum collection; most of them are represented by unique specimens or very short series, and for that reason I delayed a study of the material. It now seems pointless to prolong the delay as there is still no likelihood of a substantial amount of additional material coming to hand. In this paper I shall describe the African species only; the Malagasy species and one from Aldabra Island in the British Museum (N.H.) collection will be dealt with in another publication.

The known taxa comprising the Clusiidae were listed by Frey (1960: 26–8) who recognized 13 genera and 148 species. In the same year McAlpine (1960) described two new genera and 19 new species from Australia. Other new taxa in the Palaearctic, Oriental, Australasian and Neotropical faunas have since been described in a series of papers by Soós (see references in Soós 1968), and in works by Sasakawa (1964, 1965, 1966, 1971) and Steyskal & Sasakawa (1966). In 1968, according to Soós, a total of 22 genera and 198 species was known, of which 10 genera and 95 species occur in the Neotropics.

In Frey's checklist the only Ethiopian Faunal Region taxa are *Allometopon flavum* Lamb, *Heteromeringia plumicornis* Lamb, *H. nigrifrons* Lamb and *H. nigriceps* Lamb, all described in 1914 on material from the Seychelles Islands. In this study I am describing three new species, two from South Africa and one from northern Moçambique. One of the South African species is assigned to the genus *Tetrameringia* McAlpine, previously known only from Australia; the other species are placed in *Sobarocephala* Czerny, a genus formerly known only in the New World, to which I am assigning also *Heteromeringia plumicornis* Lamb. The known range of *Heteromeringia nigrifrons* Lamb is extended by the record of a specimen from Zululand.

In the descriptions and figures of male terminalia given below I am using, to facilitate comparison, the terms and abbreviations used by McAlpine (1960). The fourth vein index is obtained by dividing the length of the apical section by the length of the preapical section of that vein.

I am grateful to Dr D. K. McAlpine of the Australian Museum for confirming my identification of his genus *Tetrameringia* and donating specimens of it, and to Mr B. H. Cogan for information and the loan of specimens from the British Museum (N.H.) collection.

KEY TO GENERA KNOWN IN SUBSAHARAN AFRICA

1. Four pairs of fronto-orbital and three pairs of scutellar bristles present. Prescutellar acrostichal and strong presutural bristles present .. **Tetrameringia** McAlpine
- Three pairs of fronto-orbital and two pairs of scutellar bristles present. Prescutellar acrostichal and presutural bristels small and weak if present 2
2. Arista densely plumose; small but definite preapical tibial bristles present on fore and middle legs; mesopleuron undifferentiated in male; aedeagus with angular bends, not coiled .. .. **Sobarocephala** Czerny
- Arista sparsely haired; preapical tibial bristles absent; mesopleuron of male with a small but distinct circular area raised and differentiated below and usually a little forward of mesopleural bristle; aedeagus spirally coiled .. **Heteromeringia** Czerny

Genus *Tetrameringia* McAlpine

Tetrameringia McAlpine, 1960, *Rec. Aust. Mus.* 25 (4): 68–9. Type-species by original designation, *T. ustulata* McAlpine.

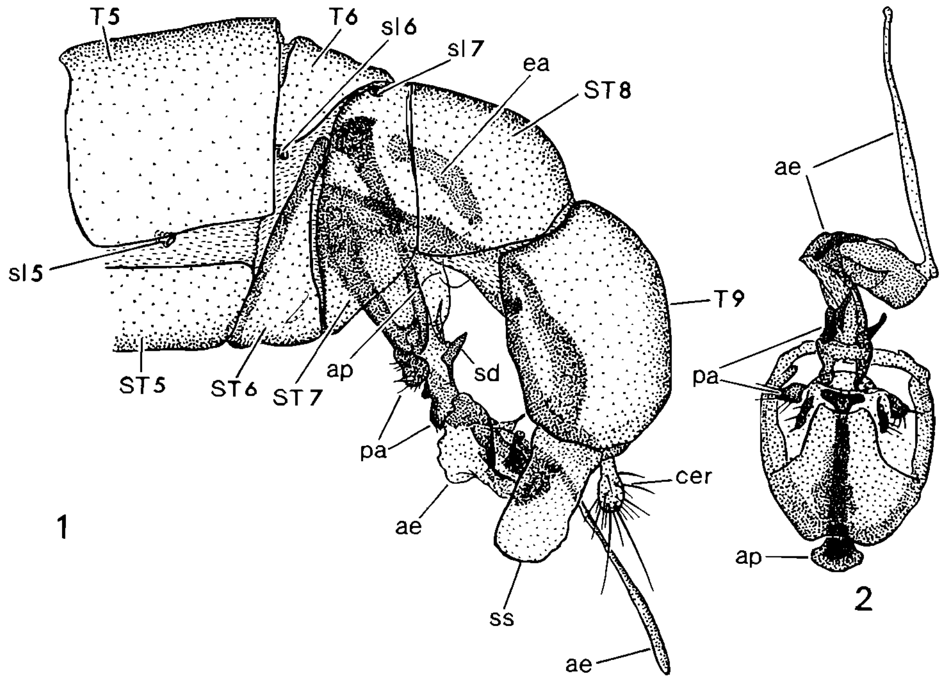
This genus was erected for two species occurring in New South Wales. I have found a South African species and have a number (perhaps as many as nine) from Malagasy. Dr McAlpine examined a selection of specimens for me and confirmed (*in litt.*) my identification of the genus; he kindly donated to the Natal Museum a pair of the type-species *ustulata* which I have examined. So considerable and disjunctive an extension of the known range of *Tetrameringia* is unexpected, but an explanation of it may be merely that Clusiidae are often difficult to collect in their preferred habitat of montane forest. It is likely that the genus will be found in suitable localities elsewhere in Subsaharan Africa and perhaps also in the Oriental Region.

In the South African species *aethiopica* the structure of the postabdomen conforms exactly to McAlpine's (1960: 65–6, fig. 26) description of the Australian species, and evidently the form and arrangement of the sclerites and nature of the aedeagus are important generic features. McAlpine drew the right side of a specimen, so the left side is figured here (fig 1). Sternite six (ST6) is tapering and reaches upwards past the lower edge of tergite five (T5); the left sixth spiracle (sl6) is similarly displaced upwards. Sternite seven (ST7) is relatively large but displaced considerably upwards on the left side where it occupies mainly a lateral position partly in contact with tergite six (T6), and the left seventh spiracle (sl7) is correspondingly displaced to near the dorsal surface of the postabdomen. Only one pair of surstyli is present (ss). The aedeagus of *aethiopica* is asymmetrical as the result of several flexures (fig. 2), and it has two groups of small, setose parameres (pa) and a *spinus ditillatorius* (sd); the apical part is a slender tube.

McAlpine's (1960: 66) key to clusiid genera based on characters of the male terminalia is partly misleading in respect of *Tetrameringia*, because the aedeagus in fact is not spirally coiled but strongly flexed several times.

Tetrameringia aethiopica sp. n.

Diagnosis: A small species (wing 2,2–3,4 mm) with largely blackish-brown body and head, and yellowish antennae, mouthparts and anterior third of frons; specimens from the type-locality in Natal have almost uniformly dark-brownish pleura, in strong contrast to which the coxae are pale whitish-yellow, and the middle and hind femora bicolorous, whereas a variety from the eastern Cape Province has largely yellowish-brown pleura except for the mesopleuron which is variably dark brown (ranging from a small central mark to the entire mesopleuron), the sternopleuron, hypopleuron and an area around the mesothoracic spiracle being more or less concolorous, and the same variety has unicolorous, pale femora



Figs 1–2. *Tetrameringia aethiopica* sp. n. male genitalia: (1) postabdomen and hypopygium in lateral view; (2) aedeagus in ventral view. Abbreviations: ae = aedeagus; ap = aedeagal apodeme; cer = cercus; ea = ejaculatory apodeme; pa = parameres; sd = *spinus ditillatorius*; sl = spiracle of left side, numbered to correspond with abdominal segmentation; ss = surstylus; ST and T = sternite and tergite, numbered to correspond with abdominal segmentation.

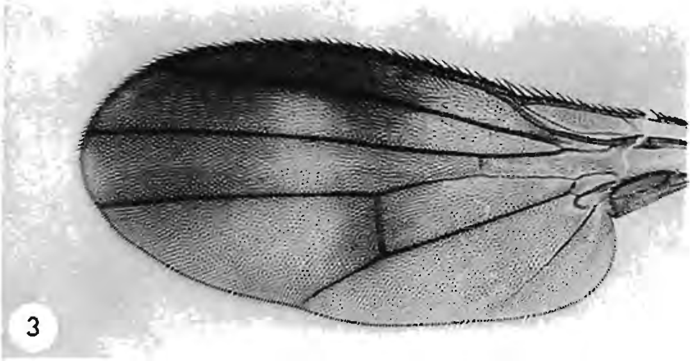
and slightly larger size. Distinguished from the two described Australian species by the generally darker dorsal coloration and numerous details in the form of the aedeagus and surstyli. Most of the undescribed species from Malagasy and Aldabra are larger in size and completely different in coloration; confusion could be possible with only one Malagasy species which is brownish-black on the dorsum, but that species has strongly bicolorous pleura (sternopleuron and hypopleuron whitish-yellow, upper pleura brownish-black), brown palps and clypeus, and bicolorous third antennal segment, apart from a more robust conformation and a multitude of other small differences.

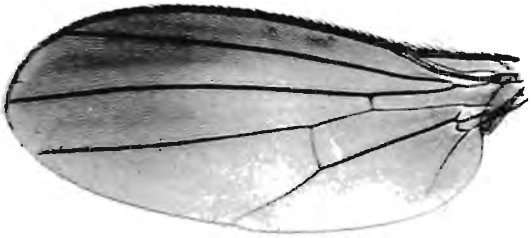
♂ ♀ *topotypes:* Frons nearly parallel-sided, slightly convergent towards antennae, slightly wider at midlength than long (from anterior edge of anterior ocellus to ptilinal suture) in males, length about 74% of width in female; frons width 35–38% of head width in males and 37% in female. Head width equal to mesonotum length in all specimens; head height 76% of head width in males, 72% in female. Gena very narrow, at middle about 11% of height of eye. Face narrow, 16–18% of head width, higher than broad, unsclerotized except at upper end between antennae. Arista evenly short-haired, hairs not longer than about 1,5 × basal diameter of arista. Spaces between orbital bristles about in proportion, 2,0—3,5—3,0, anterior and second orbital bristles subequal, shorter (about 75%) and proportionately thinner than posterior two pairs which are subequal. Inner and outer verticals almost equal in length. Postvertical bristles about as long as anterior orbitals, ocellars slightly shorter and weaker. Some fine setulae present on frons. One vibrissa on each side.

Thorax with the following bristles: one or two weak, small propleurals, sometimes on one side only; one mesopleural, one sternopleural, one strong humeral; two notopleurals, anterior one longer than posterior which is slightly shorter than humeral; one presutural, about as long as humeral; one long supra-alar; a very long anterior postalar and a much smaller, weaker, inconspicuous posterior postalar; 0+2 dorsocentrals, anterior about half as long as posterior and situated about midway between transverse sutures and scutellum; a pair of rather weak, slender prescutellar acrostichals which are slightly shorter than anterior dorsocentrals. Mesonotum with numerous, suberect, stiff hairs; posterior margin of mesopleuron and disc of sternopleuron with a few smaller, stiff hairs. Scutellum with a pair of very long (about equal to anterior postalar), suberect apical bristles, also one subbasal marginal bristle and a pair of discal scutellars in the same transverse line, subequal and very much shorter than the apical scutellars; apical two-thirds of scutellum finely pubescent, basal third glabrous. Fore-tibia with very small dorsal preapical, mid-tibia without definite preapical and with one strong terminal spur, hind-tibia without preapical and with one weak spur. Mid- and fore-femora with well-developed posteroventral row of bristles. Abdominal tergites with conspicuous marginal bristles and subrecumbent bristly hairs.

Frons shining, blackish at vertex and between ocelli, dark brown over roughly posterior two-thirds, grading quickly into brown-tinged yellow on anterior third. Antennae, palps and proboscis brown-tinged yellowish; face, parafacials and genae silvery-grey pruinose, genae and parafacials narrowly bordered with dark brown. Mesonotum and scutellum blackish-brown, pleura translucent dark brownish, lower part of sternopleuron irregularly dull yellowish in female. Coxae contrastingly pale whitish-yellow; fore-legs pale yellowish, slightly infuscated on tibia and tarsus; mid-femora whitish-yellow on basal half, remainder of leg infuscated; hind-leg pale yellowish over basal half of femur, apical half and all of tibia dark brownish, tarsus uniformly dull yellowish. Halteres whitish. Abdomen blackish-brown.

Wing as shown in fig. 3, a brownish infumation providing the pattern on otherwise greyish-hyaline membrane; r-m cross-vein close to middle of discal cell, fourth vein index 2,5–2,7.





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Figs 3–4 Wings: (3) *Tetrameringia aethiopica* sp. n. from type-locality; (4) *Sobarocephala milangensis* sp. n. holotype.

Hypopygium and aedeagus shown in figs 1 and 2, differing in many details from the Australian *ustulata* figured by McAlpine (1960: fig. 26), notably in the form of the eighth sternite (ST8) which is arched in profile instead of straight, form of the surstylus (subrectangular and slightly over twice as long as broad), in the pronounced flexure to the right in the aedeagus, and in the lack of a definite dorsal spine and lobe at the ultimate flexure.

Size: Length without antennae about—♂♂ 2,2 and 2,4 mm, ♀ 2,4 mm; wing length ♂♂ 2,5 and 2,8 mm, ♀ 3,0 mm.

Material examined: Holotype ♂, paratype ♀, SOUTH AFRICA, Natal, Pietermaritzburg, Town Bush, alt. 1 000 m, 18.xii.1961; paratype ♂ with same data except date 12.xii.1961 (all coll. B. & P. Stuckenberg). Holotype in Natal Museum (no. 1700). All specimens swept from leafy tree branches overhanging a small stream.

Tetrameringia aethiopica sp. n., var.

A series of specimens from a montane forest in the Eastern Cape Province about 500 km from the type-locality represents a distinct variety or possibly a subspecies. Although there is a considerable distance between the localities, there are intermittent forest patches suitable for these flies between them; a decision as to the status of the population from which this series was taken must be delayed until the existence and nature of intermediate populations can be investigated.

Diagnosis: Differing from topotypical specimens in the bicolorous pleura, unicolorous mid- and hind-femora, and slightly larger size. No differences in the hypopygium could be found.

♂ ♀: Pleura yellowish-brown except for mesopleuron which is variably dark brown, the range extending from mesopleuron being entirely dark to having only a small, dark brown central spot. All femora unicolorous pale yellowish.

Size: Wing length ♂♂ 2,4 mm; ♀♀ 2,9–3,4 mm, mean of six specimens 3,2 mm. Measurement of body length is not possible due to the manner of preservation.

Material examined: SOUTH AFRICA, Eastern Cape Province, Katberg Mountain, alt. 1 200 m, 2 ♂♂ 1 ♀ xii.1932, 2 ♀♀ 1–15.i.1933, 1 ♀ 15–30.i.1933, 2 ♀♀ 1–10.ii.1933 (all coll. R. E. Turner); British Museum (N.H.) 1933–69, 1933–79, 1933–108, 1933–139; a pair donated to Natal Museum.

Genus *Sobarocephala* Czerny

Sobarocephala Czerny, 1903, *Wien. ent. Ztg.* **22**: 85. Type-species by monotypy, *S. ruebsaameni* Czerny. See Soós, 1968, for synonymy.

Up till now this genus has been known only in the New World where 52 Neotropical species (Soós 1968) and six Nearctic species (Steyskal 1965: 806) are described.

I have before me two African species, one species from Aldabra, and a cluster of species from Malagasy, as well as a paratype of *Heteromeringia plumicornis* Lamb from the Seychelles, all of which obviously are congeneric and have in common a striking feature in the black, plumose arista (fig. 5). In the key to clusiid genera given by McAlpine (1960: 67–8) they trace to couplet eight where some uncertainty arises because several of them have weak presutural bristles. If this is ignored, one is faced with the choice presented by couplet nine where *Sobarocephala* and *Heteromeringia* are distinguished, the former by the possession of preapical tibial bristles (at least on the middle legs) and the length of the penultimate section of the fourth vein being about one-third (index 3,0) that of the ultimate section, the latter by the absence of preapical tibial bristles and a fourth vein index of about 4,0. The species under discussion have small, easily overlooked but definite preapical tibial bristles on the fore and middle legs, and a fourth vein index in the range 2,9–5,3 (mostly around 3,0), thus agreeing with *Sobarocephala* in one character but not in the other one given by McAlpine. An examination of descriptions of *Sobarocephala* species given by Melander & Argo (1924) and Soós reveals that the fourth vein index covers a greater range (2,0–4,5) than McAlpine indicates, so is of no use for distinguishing the two genera. Moreover, it is possible to show by the use of other characters that these African and Mascarene species do not belong in *Heteromeringia*: the males lack the distinctive mesopleural spot to which McAlpine (1960: 70) draws attention, the aedeagus is not spirally coiled, and the habitus is quite different.

In the key to genera given by Soós (1964*b*: 4–7) the species run to couplet 21 which gives a choice between *Sobarocephala* and *Heteromeringia* on the basis solely of the preapical tibial bristles being absent in the latter and well developed on at least the middle leg in the former. Again the species seem to fall in *Sobarocephala*, though that bristle is not well developed in any specimen.

A conclusive decision as to whether this group of Ethiopian Region species really does belong in *Sobarocephala* cannot be taken without the study of a representative selection of species from the Americas, and no material is available to me at present. The original description by Czerny, the account of the genus by Melander & Argo (1924: 33), and the discussions of the genus by Soós in his various papers describing new species, in fact convey little information useful for distinguishing the genus other than the nature of the chaetation. The extensive radiation of *Sobarocephala* in the Neotropics further complicates the issue because of the interspecific variation which has evolved and makes diagnosis difficult. In view of the usefulness of postabdominal structure for recognizing genera such as *Tetrameringia* and *Heteromeringia* (McAlpine 1960, and this study), it would appear that a better understanding of the limits of *Sobarocephala* might be obtained from a study of the aedeagus and sclerites in that area. However, there is no useful description for that genus in the literature; the account of the abdomen of *S. annulata* Melander & Argo given by Hennig (1938: 126, fig. 3) is unsatisfactory because many details are omitted, the spiracles are not located, and there is no figure of the aedeagus. The few figures given by Soós feature mainly the epandrium and surstylus which are not diagnostic at the generic level.

Location of this group of Old World species in *Sobarocephala* is plausible on the basis of chaetic characters but must be considered tentative. Additional support for this location is the nature of the arista mentioned earlier; a similar black, bushily plumose arista is typical of a large group of New World species, the *plumata* group (Hennig 1938: 135; Soós 1962, 1963, 1964*a*). Discrepancies suggesting that another generic location may prove to be necessary must be noted: New World *Sobarocephala* species differ in that, (1) the parafacial, base of the antenna and often median portion of the face are visible in lateral view (Mr B. H. Cogan *in litt.*, and figures by Soós); (2) prescutellar acrostichals sometimes are present; (3) the preapical tibial bristle of the middle leg is usually obvious and strong; (4) the arista is often apical.

Several noteworthy differences occur in the structure of the male postabdomen of *Tetrameringia aethiopica* sp. n. and *Sobarocephala zuluensis* sp. n., and these may prove to be of generic significance. In the *Tetrameringia* species (figs 1, 2) the sixth sternite is produced dorsad on the left side (ST6) and the corresponding spiracle (sl6) is between the dorsal end of that sternite and the left lateral end of the sixth tergite (T6); in the *Sobarocephala* species (figs 6–8) the sixth sternite (ST6) is not thus extended and the corresponding spiracle (sl6) is adjacent to the sixth and seventh sternites and sixth tergite. In the *Tetrameringia* species sternite seven is twisted far around so that much of it lies on the left side, with the consequence that the left seventh spiracle (sl7) is near the dorsum; the seventh sternite (ST7) in the *Sobarocephala* species is largely ventral but strongly asymmetrical, being best developed on the left side (fig. 8), and in consequence the sixth tergite is adjacent and closely applied to the eighth sternite, and the left seventh spiracle is more laterad.

Although widely differing in shape, the aedeagus and associated structures are essentially of the same construction. In the *Tetrameringia* species a *spinus ditillatorius* is present (fig. 1, sd) and the aedeagus is strongly flexed to the right and then flexed again so that it is directly posteriorly; whereas the aedeagus in the *Sobarocephala* species (figs 9, 10) is flexed upwards at the origin of the distal pair of parameres. In both genera the proximal parameres (figs 2, 11, pa) comprise a pair of small, irregular, setose lobes.

Sobarocephala plumicornis (Lamb) **new comb.**

Heteromeringia plumicornis Lamb, 1914, *Trans. Linn. Soc. Lond.* (2nd Ser. *Zool.*) **16** (4): 308–9, fig. 1 and plate 19, fig. 1.

The transfer of this species to *Sobarocephala* is governed by the considerations set out above. I have examined a male from the type series.

Sobarocephala zuluensis sp. n.

Diagnosis: A species of average size (♂ wing 3,0 mm), largely pale- or yellowish-orange, with blackish-brown abdomen and a broad, brown vitta on the mesonotum and scutellum, fourth vein index 3,3, third antennal segment with darkened area around arista. At present comparison is required only with *plumicornis* (Lamb) of the Seychelles, which is the only previously described congeneric species in the Ethiopian Region, and the following new species *milangensis* from Moçambique; *plumicornis* differs obviously in its smaller size (wing 2,1 mm), bivittate mesonotum and much higher fourth vein index (4,6–5,3); only a female of *milangensis* is known, but its larger size (wing 4,1 mm) will probably prove diagnostic, it has a totally different mesonotal pattern (fig. 13), fourth vein index of 4,2, and many small differences in chaetic features.

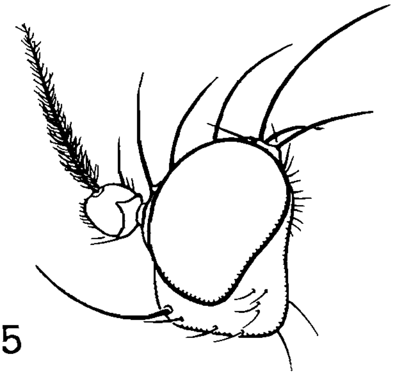

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Fig. 5. Head of *Sobarocephala zuluensis* sp. n. holotype.

♂ (Head fig. 5): Frons nearly parallel-sided, very slightly divergent towards antennae, as wide (at midlength) as long from anterior ocellus to ptilinal suture, about 37% of head width which is slightly greater than mesonotum length. Head height 74% of head width. Gena narrow, at midlength its height about 15% of eye height. Face narrow, 19% of head width, higher than broad, apparently sclerotized only in a narrow, transverse strip at upper end between antennae, but also with a narrow, raised, median ridge down remainder of face. Third antennal segment suborbicular; arista black, thickly plumose. Spaces between orbital bristles about in proportion 2:5; anterior orbitals cruciate at tips, a little longer than second orbitals and about equal in length to third orbitals; inner vertical twice length of second orbital, outer vertical equal to first orbital; postverticals slender, strongly divergent, about 62% of anterior orbital; ocellars divergent, very fine, about half as long as postverticals. A pair of strong, porrect, upcurved vibrissae present, about65% as long as inner vertical bristle and longer than all orbital bristles. Genal margin bearing three weak bristles.

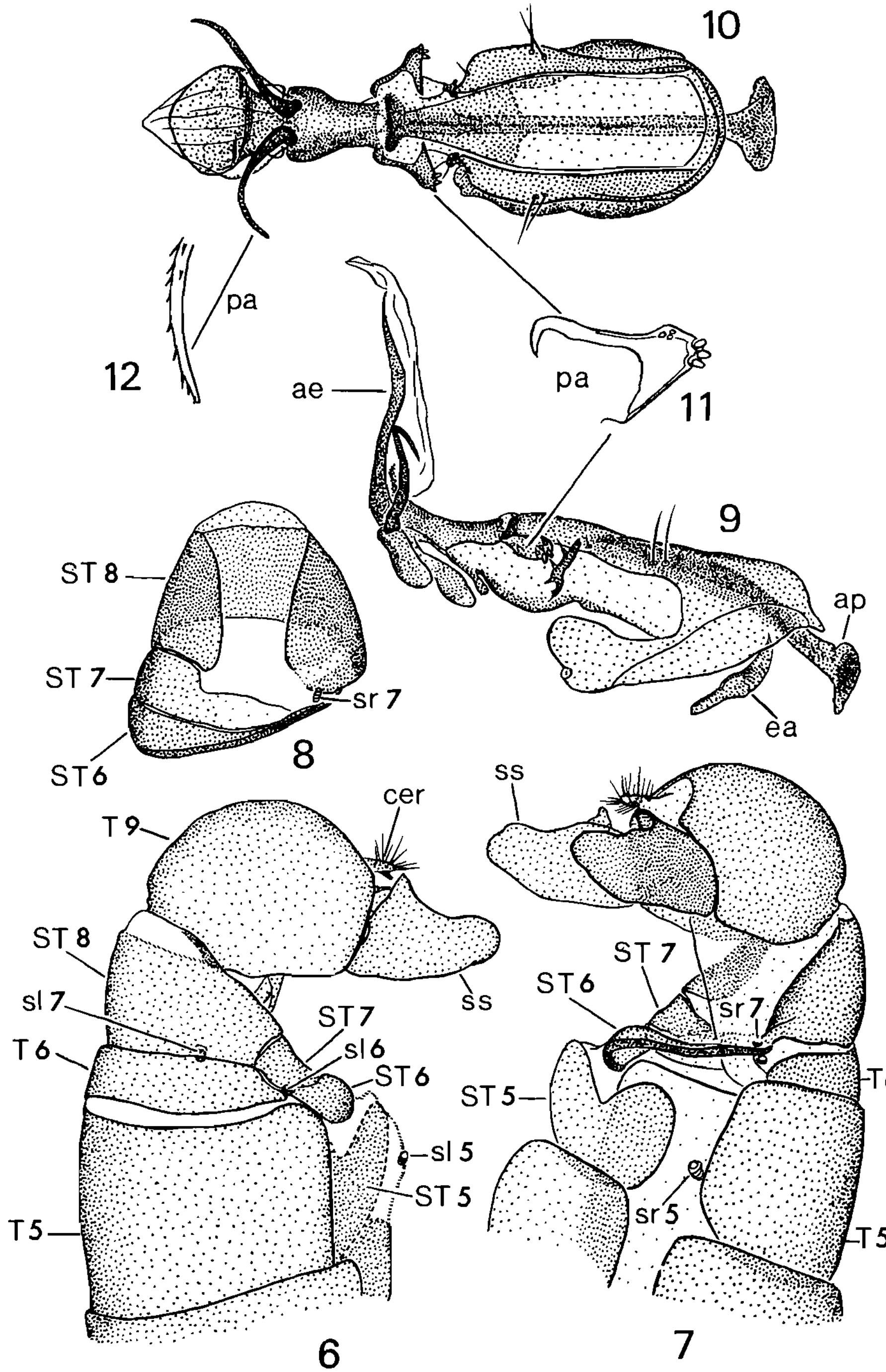
Thorax with the following bristles: two definite though slender propleurals; one mesopleural, one sternopleural, both sclerites also sparsely setulose near these bristles, sternopleuron with numerous recumbent setulae on anteroventral face; mid-coxa with two prominent bristles; mesonotum with one humeral, two notopleurals of which anterior one is a little stronger, a strong supra-alar, a very strong postalar, 0+3 dorsocentrals of which anterior one is only half as large as second which is about two-thirds as long as third dorsocentral, spacing between anterior and second pairs about 40% of distance between second and third pairs; prescutellar acrostichals absent; mesonotal setulae numerous, semi-erect, quite long (mostly about half length of anterior dorsocentral), in 7–8 irregular rows between dorsocentral lines. Super-alar declivities extensive, without setulae. Scutellum with two pairs of bristles, a strong apical pair about equal to hindmost dorsocentral, and a weaker subdiscal pair slightly longer than second dorsocentral; scutellum finely pubescent on sides, bare on disc. Fore and middle tibiae with definite dorsal preapical bristle, middle tibia also with three spurs of which ventral one is longer and darker than either the anterior (the weakest) or anterodorsal one. Hind tibia with two weak, pale spurs.

Abdomen with prominent, exposed hypopygium, surstyli freely exposed and projecting forwards. Tergites with numerous, semi-erect, brownish setae.

Frons and occiput entirely pale orange except for black ocellar spot. Antennae pale orange except for a darkened area on upper part of third segment; face and gena pale yellowish-white; mouthparts dull orange; mesonotum with a broad, brown, median vitta which extends just laterad of dorsocentral lines and continues on to disc of scutellum, also a poorly-defined brownish area on asetulose declivous sides of mesonotum, on humeral callus and on narrow upper part of mesopleuron; another brownish area covers sclerites between wing and haltere and also postscutellum. Abdomen uniformly dark blackish-brown, surstyli pale brownish. Anterior coxae pale whitish; all femora pale yellowish-orange; tibiae and tarsi of middle and hind legs concolorous, of fore-legs brown. Halteres mostly pale yellowish-brown, brown on upper edges.

Wing similar to that of the following species (fig. 4); costa obviously broken at end of subcosta; r-m cross-vein a little beyond middle of discal cell, fourth vein index 3,3.

Genitalia as figured (figs 6–12); tergite five normal, sternite five (ST5) with deep median excision on hind margin; tergite six (T6) semi-annular, sixth spiracle on each side located just beneath termination of this sclerite; sternite six (ST6) mainly a narrow, transverse, strongly sclerotized strip broadened on its left side, on the right side attached to sternite eight (ST8) and narrowly separating the right sixth and seventh spiracles at that point (fig. 7) sternite seven (fig. 8, ST7) very asymmetrical, broadest on left where it is closely attached to sternites six and eight (fig. 6), the left sixth spiracle (sl6) situated at the common meeting point of these sclerites; sternite eight (ST8) as figured, almost symmetrical, its



Figs 6–12. *Sobarocephala zuluensis* sp. n. male genitalia: (6, 7) postabdomen and hypopygium in lateral and ventrolateral views, left and right sides respectively; (8) sternites 6–8 ventral view; (9, 10) aedeagus in lateral and dorsal views; (11) proximal parameres; (12) apical part of distal paramere. Abbreviations as in figs 1 and 2, also: sr = spiracle of right side, numbered to correspond with abdominal segmentation.

sides abruptly folded inwards (fig. 8) and enclosing laterally the space in which aedeagus is situated; tergite nine and surstyli as in figs 7 and 8 (T9, ss). Aedeagus and associated structures as in figs 9–12; distal pair of parameres produced into slender, curved, microscopically spinose rods (fig. 12, pa); aedeagus reflexed upwards at origin of distal parameres, strongly flattened, with membranous sac on dorsal surface and apex; proximal parameres comprising a pair of lobes (fig. 11) bearing sense organs apically, and a pair of irregular, setose strips closely adjacent; ejaculatory apodeme (ea) small.

Size: Length without antennae about 3,0 mm; wing length 3,0 mm.

Material examined: Holotype ♂, SOUTH AFRICA, Zululand, Ngoye Forest between Eshowe and Empangeni, February 1957 (coll. B. R. Stuckenberg): in Natal Museum (no. 1701).

Sobarocephala milangensis sp. n.

Diagnosis: Obviously distinguishable from *plumicornis* (Lamb) of the Seychelles and *zuluensis* sp. n. of South Africa (as well as all the undescribed Malgasy species) by the larger size (♀ wing 4,1 mm), thoracic pattern (fig. 13) and apparently the fourth vein index of 4,2. Although represented by a female only, this species seems adequately distinct for its description to be based on a holotype of that sex.

♀: Frons a little divergent towards antennae, slightly wider at midlength than long from anterior ocellus to ptilinal suture (length 93% of width), about 41% of head width which is equal to mesonotum length. Head height 65% of head width. Gena narrow, its height below lowest point of eye about 15% of eye height. Face biconcave, its width at midlength about 21% of head width; upper half of face differentiated in colour from lower half except narrowly on sides of upper half, but it is not certain whether the upper half is more strongly sclerotized except that there is an apparently sclerotized, roughly hourglass-shaped, median strip of more opaque colour and matt texture on upper half. Third antennal segment suborbicular; arista plumose as in *zuluensis* (fig. 5). Spaces between orbital bristles in proportion 2,0:3,75; orbital bristles damaged or displaced, so no further data can be given about them; postverticals, ocellars and all verticals except one outer vertical are missing. One very strong, porrect, upcurved vibrissa on each side; lower margin of gena with a series of five fine bristles.

Thoracic chaetation as in *zuluensis*, except that both propleurals are very fine, anterior dorsocentral is one-third length of second which is three-quarters length of third dorsocentral, spacing between anterior and second pairs only about 10% of distance between second and third pairs. Apical scutellar bristles very slightly larger than posterior dorsocentrals, subdiscal scutellars much weaker, only about 53% of second dorsocentral and 38% of apical scutellar bristle. Fore and middle tibiae with definite though small dorsal preapical bristle; mid-tibia with small anterior spur, stronger anterodorsal spur and much stronger posteroventral spur; hind tibia with two subequal spurs, a dark anteroventral and brown posteroventral.

Frons, occiput, face and mouthparts orange; black ocellar spot present; lower half of face except narrowly in midline, and rather more than upper half of frons, translucent (possibly postmortem changes); antennae dull orange, third segment paler than basal two and with a dark brown area on dorsal surface and outer upper surface to level of apex of triangular projection of second segment. Gena and parafacial silvery-pruinose. Thorax orange, mesonotum slightly brown-tinged and with a bold pattern (fig. 13), comprising a large, blackish-brown mark on each side which extends on to sides of scutellum; pleura orange except for pleurotergite and mediotergite ('metapleuron' and 'postscutellum' *auct.*) which are entirely and sharply-defined brown. Abdomen dark brown dorsally, irregularly blackened along tergal hind and side margins; retractable apical segments dull yellowish-brown; venter dull orange. Femora concolorous with pleura; tibiae and tarsi uniformly more brownish than femora, except those of hind leg which are almost concolorous. Halteres dull orange.

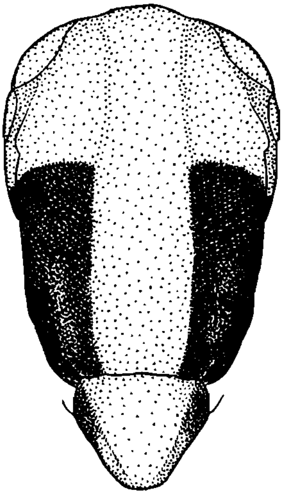


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Fig. 13. Mesonotum and scutellum of *Sobarocephala milangensis* sp. n. holotype.

Wing shown in fig. 4; r-m cross-vein a little beyond middle of discal cell; fourth vein index 4,2.

Size: Length without antennae about 4,2 mm; wing length 4,1 mm.

Material examined: Holotype ♀, MOÇAMBIQUE, Milange (16° 09'S, 35° 44'E), from forest on Tumbine Mountain, July 1957 (coll. B. & P. Stuckenberg); in Natal Museum (no. 1702). The type-locality is adjacent to the border with Malawi and the species is likely to occur in montane forest in that territory.

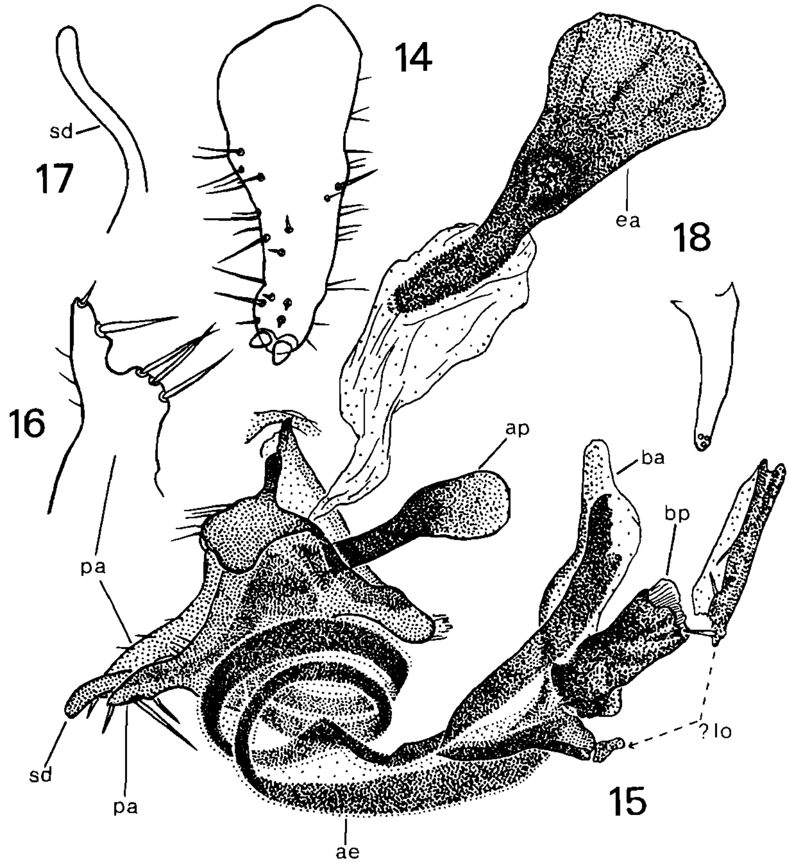
Genus *Heteromeringia* Czerny

Heteromeringia Czerny, 1903, *Wien. ent. Ztg.* 22: 72. Type-species by monotypy, *Heteroneura nigrimana* Loew, 1864.

This widespread genus contains about 49 described species and is known from all faunal regions; no species has formerly been recorded from Africa.

The specimen recorded below from Zululand agrees with Lamb's description of *nigrifrons* in all details except the fourth vein index; the wing shown in the photograph given by Lamb has 8,3 for that index, considerably larger than the 6,3 of the Zululand specimen. There is no published study of variation in this index in Clusiidae, so the significance of the difference is uncertain. However, it is noteworthy that the New Guinea species *H. cornuta* Sasakawa (1966: 12) shows a range as large as 5,5—8,5 for the three known specimens.

Mr Cogan kindly sent me the hypopygium of a paratype of *nigrifrons*. Comparison with the Zululand specimen reveals that noteworthy differences exist only in the shape of the parameres and surstyli, more particularly the latter which are decidedly more slender and have three instead of two broadly conical setae at the apex in the paratype (figs 14, 18). Differences between the two parameres of the paratype equal the degree to which each differs from the paramere of the Zululand specimen shown in fig. 16.



Figs 14–17. *Heteromeringia nigrifrons* Lamb, male genitalia of Zululand specimen: (14) left surstylus; (15) aedeagus in lateral view; (16) paramere at base of aedeagus; (17) *spinus ditillatorius*. Abbreviations as in preceding figures, also: ba, bp = anterior and posterior branches of distal fork of aedeagus; ?lo = a spinose lobe broken in the preparation, probably originally attached at the site indicated by the dotted line. Fig. 18, left surstylus of paratype, not to same scale.

Heteromeringia nigrifrons Lamb

Heteromeringia nigrifrons Lamb, 1914, *Trans. Linn. Soc. Lond.* (2nd Ser. *Zool.*) **16** (4): 309–10, fig. 2 and plate 19, fig. 2.

Diagnosis: A species with entirely black thorax, abdomen, occiput and frons; face, antennae, parafacials, narrow part of gena bordering eye, apex of palps, all dull orange-yellow; all coxae, paricularly fore-coxae, contrasting whitish; fore-legs black except for dull whitish basal quarter of femur; fore-tarsi strongly flattened laterally; middle legs dull yellowish except for dark basal half of femur; hind legs blackish-brown except for dull yellowish basal third of femur and all of tarsus. Halteres blackish, wing patterned as in Lamb's fig. 2. Genitalia as in figs 14–18.

♂ (Zululand specimen: data additional to Lamb's description): Frons slightly narrowed towards antennae, slightly longer (from anterior ocellus to ptilinal suture) than wide at mid length, width about 32% of head width which is slightly less than mesonotal length. Head height 67% of head width. Gena height below lowest part of eye about 16% of eye height. Face narrow, at its mid length about 15% of head width, apparently unsclerotized except perhaps between antennae which are close together. Raised spot on mesonotum whitish, situated below and slightly anterior to mesopleural bristle. 0+3 dorsocentrals, second pair situated anterior to a line joining supra-alars, anterior pair small, about 40% of length of second pair; about 9 rows of interdorsocentral setulae; mesonotum and scutellum with appressed, flattened, scale-like pubescence, this also variably developed on meso-, meta- and sterno-pleura. Preapical dorsal bristle absent on all tibiae; mid-tibia with one spur, placed ventrally.

Genitalia as in figs 14–17; postabdomen as described by McAlpine (1960); cerci fused; surstylus (fig. 14) narrow, with two broadly conical setae at apex; characters which are diagnostic are the form and chaetation of the parameres (figs 15, 16, pa), the long, sinuous, narrow *spinus ditillatorius* (figs 15, 17, sd) between the parameres, form of the ejaculatory apodeme (fig. 15, ea), and details of structure of the apex of the irregularly formed aedeagus (fig 15, ba, bp, lo).

Material examined: 1 ♂, ZULULAND, Ndumu Game Reserve, from *Ficus sycamorus* forest on Pongola River south bank, 27 October 1972 (coll. M. E. Irwin); in Natal Museum.

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